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D.C. Grid Volts ....	-50	-200 V.
D.C. Plate Current	95	100 M.A.
Plate Input .....	38	60 W.
Screen Input .....	2	3.5 W.

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Vol. 3

FEBRUARY

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No. 2

# XTAL

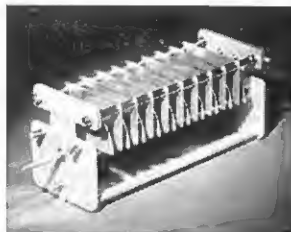
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## HAMMOND CONDENSERS

R.  
S.  
G.  
B.

**XTAL**

PUBLISHED MONTHLY BY  
THE VE OPERATORS' ASSOCIATION

AT

106 JARVIS STREET  
TORONTO, ONTARIO, CANADA



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## We Lend Our Support

Elsewhere in this issue there is an article by Major F. A. Burgess relative to the Canadian Amateur Radio Co-operation Corps, which we hope our readers will read carefully.

It has been the privilege of the VE Operators' Association to be requested to lend its nationalism to the furthering of the organization and development of this highly laudable enterprise. We are, therefore, throwing our full force behind the effort, and we are commending not only to our members, but to amateurs generally, that they ally themselves with this civilian activity which, when completely organized, will be a potential instrument of infinite value to our government.

The C.A.R.C.C. extends to the amateur radio fraternity an opportunity to lend its facilities towards the training of its adherents against the eventuality of the day when we may be called upon to place that training at the disposal of our government in whatever sphere of activity it would deem our efficiency the most beneficial. The new organization is an effectual answer to those of our critics who demand to know the value of amateur radio. The value of C.A.R.C.C. will be immediately apparent to every ham, we are sure.

One may extract an immeasurable pleasure from his participation in a hobby, but that pleasure is increased tenfold if there is a realization that the hobby, part of the time, is being used to equip one for an invaluable service to his country should the occasion arise.

Our President, Mr. F. H. B. Saxon, VE3SG, has been closely collaborating with local military authorities for some considerable time with the result that progress has been made to the point that it is anticipated that C.A.R.C.C. will be in operation before the end of January. We are happy that the head of our Association has found it possible to arrange for the lending of his talents to this worthy effort.

The undertaking is not in any sense a local one. On the contrary, it is national, but is receiving its sponsorship from the local Military District — or that portion of it representing C.A.R.C.C. sphere of activity. It is the hope of its guiding spirits that, within a short time, the organization will receive the imprint of officialdom from the Department at Ottawa. There now seems to be little doubt of that.

In the meantime, it is the privilege of amateur radio to anticipate that action by immediately creating an organization, and it is the activity of the VE Operators' Association to form that organization from coast to coast. VE Ops will be glad to co-operate with any group or movement desiring to further the work.

There are many hams who enjoy good, snappy operating with a close adherence to procedure. Our associates who are so minded will be entirely in their element in C.A.R.C.C. Even those of us who can find only a restricted time for such activity will find a definite place for ourselves in the scheme.

The plans and procedure to be followed will be found interesting, and of tremendous benefit in the making of good operators. Those of us who have had Army Signal experience — especially during the war — appreciate the precision that comes from training. We realize that the training received is necessary to efficiency, and that it contributes unlimited pleasure to operating.

Efficiency, introduced by systematic training, grows on the individual in a surprisingly short time. It is like a habit — it grows on him, and he cannot shake it. In ham radio, the man of precision is a pleasure to hear on our bands. C.A.R.C.C. will do that for us, and at the same time we shall be equipping ourselves for service.

A communication addressed to our President at 802 Lee Ave., Toronto, will bring complete details and application forms to all interested members.

## Report of First Annual Meeting

The first annual meeting of the VE Operators' Association took place on Wednesday, Jan. 18, at the Oxford Hotel, Toronto, Ont.

The meeting was called to order at 8.35 p.m. by the president, who welcomed the following members who were present: VE3WK, 3RF, 3ACI, 3RF, 3VD, 3APS, 3GT, 3ZE, 3BD, 3AID, 3JL, 3QF, 3AOS, 3ADB, 3EF, 3UX, and 3IW.

The president then presented his report.

### President's Report

To the Members of the VE Operators' Association:

I take pleasure in submitting herewith my report covering the first year's activity of our association.

From time to time the pages of XTAL have covered association activities, and therefore I shall not attempt to enlarge on these details, but will merely present an official review and report.

One of the prime purposes of our association is the unifying of Canadian amateur radio. Great strides have been made toward making that ideal condition an assured fact. The progress accomplished in that direction has been made possible through the large measure of co-operation received from all quarters of the Dominion.

The VE Operators' Association recently sponsored a petition relative to unlicensed operating, particularly on the 56 mc band. The petition was duly presented to the Minister of Transport, and while there is at the moment no official report to offer, it is our understanding that the department has given consideration to our presentation and has already instituted some form of action.

Within the scope of a national organization is the creation of opportunities for the development of friendships. We have endeavoured to further that effort through the medium of QSO parties, an activity which we believe has been fully appreciated.

A further effort along similar lines is the Field Day to be held later. The January issue of XTAL carried details of that proposal. Your executive committee hope that there will be a hearty response to the initiation of the Canadian Field Day.

Your association continues to be affiliated with the A.R.R.L., and recently was granted affiliation by the R.S.G.B. Members will realize their eligibility for

any privileges which those affiliations extend.

We are still operating under a provisional constitution, as the committee charged with drafting our ultimate constitution has been moving slowly in an effort to embrace all factors necessary to a satisfactory constitution for a national organization.

It is a happy pleasure to report that North Riverdale Club of Toronto was the first club to have every one of its members become members of our association. The members of that club have cheerfully assisted our efforts in every possible way, and we are indeed indebted to them for the co-operation it has been our privilege to enjoy.

Your president for some time has been interested in the formation of the Canadian Amateur Radio Co-operation Corps, and it can now be reported that the VE Operators' Association is collaborating with local military authorities in the formation of C.A.R.C.C.

I can hardly draw this report to a close without expressing my sincere appreciation to the officers and members of the executive committee for the splendid support they have accorded me since the date I assumed office. It would not have been possible for me to even attempt to discharge the duties of my office without the constant eagerness and sincerity of every member of the executive committee, who has each been more than willing to sacrifice his own time and pleasure in the interests of the association. As an evidence of their sincerity, I would like to refer to the hamfest held in Toronto during the month of October last. Each member of that committee obligated himself to assume his proportion of any deficit which might accrue. Fortunately, the event was a success and a small profit was the result. That surplus was turned into the association funds.

I thank the members for the privilege of serving as your president, and can assure you I am looking forward to a further pleasant period of service in behalf of Canadian amateur radio.

FRED H. B. SAXON,

President.

Toronto, January 18th, 1939.

On motion of VE3VD, seconded by VE3GR, the president's report was unanimously accepted.

The secretary-treasurer then presented his report.

## Secretary-Treasurer's Annual Report

Jan. 18th, 1939.

It is with great pleasure that I, as secretary-treasurer for 1937-38, present for your approval my report. I say pleasure because I feel sure you will agree that the association has gone far in the short time it has existed.

In the fall of 1937, the S.C.M. of Ontario, Mr. Fred H. B. Saxon, after conferring with a number of local amateurs, called a meeting for the purpose of forming a social amateur club composed of active amateurs. After one or two monthly meetings the idea of making the association into a national organization was born, it being felt by all the charter members that there was a definite place in Canada for a national amateur body of, and for, strictly Canadians. It was felt that such a body, if it materialized, would be of great use to all Canadian amateurs. The first step toward forming this national body was made by the charter members who sponsored the first issue of "XTAL" in April, 1938. The reception of the plan to form such a body, as well as the reception accorded "XTAL," was far greater and more national than the charter members had anticipated. Since that time, I think you will agree, the association has gone rapidly ahead.

I should like to record here that the name of the association was suggested by VE3ABW, who now resides in England.

The charter members, numbering 15, agreed on paying dues of 50c per month, or \$6.00 per annum, in order to build up a treasury. National membership was solicited the latter part of March, 1938, and VE5DY became the first outside member. The number of members increased rapidly, so that as of Dec. 31 last there were 12 charter members, 218 national members, and 8 short wave listeners, making a total of 238 members, more than 90% of this total being active amateurs on the air. The assessment for national members was \$1.00 per annum, which included subscription to "XTAL."

A constitution committee was appointed to draft a constitution for the national organization, and I would like to report that as this is being given the most careful consideration by the committee and by clubs throughout the Dominion the final draft has not yet been presented. Further response is anticipated from a number of clubs. It will readily be seen that in order to serve the best purpose to the most Canadian amateurs the question of a final constitution is a serious

one and worthy of every consideration possible. It is expected that in the near future the members shall have the opportunity of seeing the proposed constitution and of voting on same.

Regarding the financial standing of the association, a complete and audited report of finances is attached to this report. In order to save time I shall only draw your attention to some of the highlights in this report. The total revenues from the association's formation up to and including Dec. 31, 1938, are made up as follows:

Executive Account .....	\$ 70.75
Members' Account .....	227.75
Oct. 1st Hamfest .....	19.05
April "XTAL" Ads. ....	207.25
May " " .....	100.77
July " " .....	71.96
Sept. " " .....	111.75
Jan. " " .....	126.44
<b>Total .....</b>	<b>\$935.72</b>

Total expenses are made up as follows:

Exec. members A.R.R.L. memberships, part of \$6.00 annual dues ....	\$ 24.00
Postage, printing, R. S. G. B. affiliation fees, stationery, etc.....	52.72
Cost printing "XTAL" and posting same ....	782.44
Prizes and bank exchange .....	5.95
<b>Total .....</b>	<b>\$865.11</b>

This leaves a net profit after all operations of \$70.61.

Although this profit after all operations is only \$70.61, I think you will agree that a fairly careful job has been done by the charter members. It should be remembered that close to 3,500 "XTAL's" of each issue have been mailed out, and that this entails a postage expense of \$35.00 per issue. As the next and future copies of "XTAL" will be going out to members only, there will be a saving of close to \$30.00 per month on postage alone, compared to the former expense. The costs of printing and publishing will be substantially reduced also. With the splendid co-operation assured us by some of our advertisers for the future, the revenue from advertising in future issues should come very close to covering publication costs. This will enable the members to look forward to receiving better and fatter issues of "XTAL" in the future.

I should also like to record in this report that the addressing of stickers for mailing 3,500 copies of "XTAL" per issue has been done by those charter members able to use at least two fingers on a typewriter, done at no expense to the association. I should also like to record that, with the exception of a \$1.00 parking fine and an allotment of \$1.00 for car expenses to the secretary while soliciting advertising, not one cent has been paid to any member. All work on the association and "XTAL" has had to be done in spare time, but those who have done the work feel that they have been fully repaid by the fine response that has come in from coast to coast. Such is the spirit behind amateur radio.

In closing I should like to report that since Jan. 2 no less than 52 new applications for membership have come in, so that as of to-day's date the association consists of 290 members.

Do you not agree that it is more than evident that there is a real place in Canada for our association, particularly when in the short space of ten months we have a total membership of 290?

S. B. TRAINER, Jr.

On motion of VE3VD, seconded by VE3WK, the secretary-treasurer's report was unanimously accepted.

The editor of "XTAL" then gave his report.

On motion of VE3GT, seconded by VE3VD, the editor's report was unanimously accepted.

The president then called a short recess.

Upon resuming the session the president called upon VE3BD, who presented the following paper entitled "Why Clubs Should Control the VE Operators' Association":

We must all feel that a national association of Canadian amateurs is a necessary item to our amateur welfare, otherwise we would not be here.

We have such a national association interested solely in Canadian amateurs, and that is the VE Operators' Association, and this VE Operators' Association is growing every day, as we as Canadians are beginning to realize that our own Canadian organization is necessary to our welfare.

We should all be proud to be a part of such a coast-to-coast Canadian spirit that all of us are building up in the VE Operators' Association.

However, too many of us are leaving it to someone else to do the work (and others are willing to do the work), and it's of course those who do the work who get the criticism.

Individuals, then, are at a disadvan-

tage from the start as representatives of districts or provinces, and to build up this association on individuals as representing sections or districts would be a handicap to our growth.

We have seen and experienced the results of an organization attempting to be national with single persons as representatives, and have seen how they have failed as being spokesmen for sections or districts, and that with opinions and votes these representatives have made they have not done right by those that they represent.

This is not the representatives' fault entirely, but rather the system, as they as individuals will naturally have supporters and also objectors. These objectors are usually of that mind for personal or some petty reason, and as a result do not or cannot voice opinions on national issues for the good of the cause, as they would not want to agree with the representative. This is not true amateur spirit, but nevertheless it happens everywhere, and we have had objectors with the VE Ops. ever since it started, maybe because it was running in addition to the old system. Whatever these objections may be, we cannot let such feelings interfere with an up-and-coming organization that is truly Canadian for Canadian amateurs.

Fortunately we have a solution. We have all across this Canada of ours a large number of radio clubs. These clubs are made up of active amateurs, interested therefore in the welfare of Canadian amateur radio, otherwise they would not be interested enough to belong to a radio club, and a real amateur really interested in Canadian amateur radio will belong to a radio club unless he is isolated or is too self-centred.

These clubs are then representative of the feelings of that section or district, and how much better it is to have these clubs decide national questions and to be the backbone for this Canadian amateur association.

Therefore, gentlemen, I would like to make a motion, and move that this VE Operators' Association have its headquarters and business staff carry on as previously, and that all radio clubs across Canada be the governing or directing bodies on all matters pertaining to all Canadian amateur activities, policies and constitutions, and that these clubs' votes be those used in deciding points at issue. These clubs, therefore, representing the districts instead of individuals, this will mean that questions under discussion will be discussed at these clubs and voted on, these views being passed on to headquarters.

In closing I would like to say that I'm proud to be a Canadian, and am proud to see that at last we have our own Canadian association in the VE Operators' Association. Let's all do our bit in such a worthy cause.

Considerable discussion followed the presentation of the above report, in which VE3BD, VE3AID, VE3IW, VE3ZE, VE3GT, VE3GR, and VE3APS participated. Following this discussion VE3APS moved and VE3UX seconded: "That a committee be struck consisting of the officers, constitution committee, and VE3BD, to go into the matter with clubs and members, and to present their suggestions as soon as possible." This motion was carried unanimously.

The meeting was then thrown open for general business.

VE3VD explained why he felt the last motion passed was a most excellent one, and worthy of every consideration possible.

VE3GT explained about the past and future circulation of "XTAL," and the reasons for same.

VE3EF explained that he thought it was not in the best interests of all that the VE Contest for January 28th should be held at the same time as the A.R.R.L. ORS Party. VE3GT replied that it was an unfortunate coincidence, that the VE Contest was purposely set at January 28th to avoid the ORS Party, which is generally held the third week of the month in which it takes place. VE3GT also explained that an error had been made in allotting the Prairie Provinces part of the 14 mc phone band, but that he felt no serious harm would result, in that CW-phone contacts were encouraged in the contest, and that contacts within a province did not count. VE3GT also advised that numerous comments had been received since the contest announcement was made, and that he felt a summary of all comments would provide some definite basis for VE Contests or QSO parties for the future.

VE3IW suggested the use of QFL and QFH be used on the air, meaning "I am tuning from my frequency to the low frequency end of the band" and "I am tuning from my frequency to the high frequency end of the band." Following VE3IW's suggestion the editor of "XTAL" was requested to give this suggestion publicity in the next issue of "XTAL."

VE3QF asked for information on the advantages of the association being

## Attention, Members!

The letter reprinted below has been sent by the A.R.R.L., C.G.M., to all Section Communication Managers and affiliated A.R.R.L. clubs. As the VE Operators' Association is one of Canada's affiliated A.R.R.L. clubs, we reprint the letter in order that all our members may have the opportunity of reading it and sending in suggestions. As these suggestions must reach the C.G.M. by Feb. 10, we suggest you sent in your suggestions immediately, using air mail, if necessary.

169 Logan Avenue,  
St. Lambert, P.Q.  
January 12th, 1939

As in previous years, Mr. Walter A. Rush, Controller of Radio, Department of Transport, has again requested me to inquire if you desire to submit, through me, for the consideration of the Department, any proposals regarding changes in the frequency bands or types of emission now allotted to amateur services, or the conditions governing the operation of Amateur Experimental Stations, in the 1939-40 licenses.

Mr. Rush has advised me that in connection with amateur frequency allocations, under the Inter-American Convention, the bands 112-118Mc. and 224-230 Mc. are now open for assignment to amateur services and the Department is favourably disposed to authorizing Canadian amateurs to use types A1, A2 and A3 transmission in these two bands, in the 1939-40 licenses, if desired.

If you have any recommendations to make in this connection, will you please forward them to me, so that they will be in my possession before February 10th, 1939. At the same time will you indicate the approximate number of amateurs favoring the suggestions you propose.

73,

Yours faithfully,  
A. REID,  
Canadian General Manager.

affiliated with various foreign societies, to which VE3ZE replied.

As no further business was suggested by those present, VE3EF moved and VE3VD seconded that the meeting be adjourned. This motion was carried unanimously and the meeting adjourned at 11.10 p.m.

## British Empire Radio Union Tests

We are pleased to advise that the VE Operators' Association is now affiliated with the Radio Society of Great Britain. This makes all our members eligible to take part in the B.E.R.U. tests during the first two week-ends of February.

To those of our members who have never participated in the B.E.R.U. tests of the past, you have really missed something. Here is the VE's annual opportunity to work some real dx with no other continental North American competition.

We strongly urge that every one of our members participate. In the past Canada has not been well represented in empire activities. Let us put the old VE's on the map in empire radio. Regardless of your power, just send a few "test B.E.R.U." calls, and you will be surprised. Note also that intersectional VE contacts with the exception of VE1 and VE2 count for points in the tests. Please read the rules carefully, which are outlined below. Please send your results direct to the R.S.G.B. within seven days of the close of each contest. Please also report your results to XTAL in order that we can all see how you have done.

Reserve February's first two week-ends on the air for fellow-Britishers. It is the VE's best opportunity to get the needed contacts for WAC, WBE, or WAVE.

### General Rules.

1. The events will be divided into three sections, namely:
  - (a) Senior (High Power) Transmitting Contest.
  - (b) Junior (Low Power) Transmitting Contest.
  - (c) Reception Contest.
2. The Contests are open to all British subjects living within the British Empire and British Mandated Territory, who are fully paid-up members of either the R.S.G.B. or one of the British Empire Societies. All entrants agree to be bound by the rules of the Contests.
3. Entrants who are not members of the R.S.G.B. must certify in the declaration overleaf that they were fully paid-up members of their local Society at the time of the Contests.
4. An Entrant not located in one of the prescribed Prefix Zones shall be considered as being in the Prefix Zone nearest to his station.
5. Persons holding transmitting licences may not enter for the Reception Contests.
6. Contacts with, or reports from, ships or unlicensed stations located in coun-

tries where licences are obtainable will not be permitted to count for points. The decision as to whether a station is to be classed as unlicensed will rest with the R.S.G.B. Awards Committee.

7. Only one person will be permitted to operate a specific station for the duration of any section of the Contest.
8. A Trophy will be awarded to the fully paid-up member of the R.S.G.B. scoring the highest number of points in each section of the Contest. Certificates of merit will be awarded to the first three stations in each Contest, and also to the leading station in each Prefix Zone, providing at least three entries have been received from the Zone in question. In addition, a second certificate will be awarded to each Zone provided ten or more entries are received from that Zone.
9. Competitors may enter for both the Senior and Junior Transmitting Contests, but individuals are eligible to win only one of the Trophies. They will, however, be permitted to receive certificates of merit in both Contests.
10. The declaration at the head of the Entry Form must be signed by the operator, who will be recorded as the competitor.
11. Entry Forms, including the Analysis Sheet, unless completely filled in, will be disqualified.
12. Separate entry forms must be used for each section of the Transmitting Contest.
13. All entry forms must be posted within 7 days of the close of each contest. No entry will be accepted at Headquarters, R.S.G.B., 53 Victoria Street, London, S.W.1, later than March 20, 1939.
14. The judging of entries will be carried out by an R.S.G.B. Awards Committee. The President's decision will be final in all cases of dispute.
15. No correspondence can be entered into regarding any decision made by the Council or by the President.

### Rules for Senior (High Power) Transmitting Contest.

1. This section of the Contest will extend from 00.01 G.M.T. Saturday, Feb. 4 to 24.00 G.M.T., Tuesday, Feb. 7, 1939. A maximum of 30 hours' operation may be selected from the total 96, and only stations contacted during this period may count for points. A line must be drawn across the log at the close of each spell of operation and the total hours to that point recorded in the margin.

2. Fifteen points will be scored for the first contact with a British Empire station located in any Prefix Zone outside the competitor's own Zone, fourteen points will be scored for the second contact with the same Zone, thirteen points for the third contact, and so on, to the fifteenth contact, which contact will score one point. All contacts with that particular Zone thereafter will count one point each, and in all cases contacts will be irrespective of the frequency band used.
3. Only one contact with a specific station may be made on each band during the Contest.
4. Any amateur frequency band may be used, providing the input to the valve or valves delivering power to the aerial is not in excess of that specified on the competitor's licence, and in no case more than 250 watts, and providing the entrant has permission to operate his station on the band or bands in question.
5. The conditions laid down in the competitor's transmitting licence shall be observed.
6. A serial number giving R.S.T. and the number of the contact must be exchanged before points may be claimed. The number shall comprise six figures.
7. Specially appointed Band Monitoring stations, under the auspices of the R.S.G.B., will be active during the Contests. Any station reported off frequency by these checking stations will be disqualified without appeal.

### Rules for Junior (Low Power) Transmitting Contest

The rules for this section of the Contest are the same as for the Senior Contest, except for the following:—

1. The Contest will extend from 00.01 G.M.T. Thursday, Feb. 9, to 24.00 G.M.T. Sunday, Feb. 12, 1939.
2. The input to the valve or valves delivering power to the aerial must not exceed 25 watts.

### Prefix Zone Chart and Score Analysis

Prefix Zones	Contacts	Points
EI	.....	.....
G, GI, GM, GW	.....	.....
ST	.....	.....
VE 1, 2	.....	.....
VE 3	.....	.....
VE 4	.....	.....
VE 5	.....	.....
VK 2, 3, 4, 7, 8, 9	.....	.....
VK 5, 6	.....	.....
VO	.....	.....
VP 1	.....	.....
VP 2	.....	.....
VP 3, 4	.....	.....
VP 5, 7	.....	.....
VP 6	.....	.....
VP 8	.....	.....
VP 9	.....	.....
VQ 2, ZE	.....	.....
VQ 3	.....	.....
VQ 4	.....	.....
VQ 5	.....	.....
VQ 8	.....	.....
VR, ZK, ZM	.....	.....
VS 1, 2, 3, 4	.....	.....
VS 6	.....	.....
VS 7	.....	.....
VS 8	.....	.....
VU 2, 7	.....	.....
XZ	.....	.....
ZB 1, 2	.....	.....
ZC 1, 4, 6	.....	.....
ZD 1, 2, 3, 7, 8	.....	.....
ZL 1, 2	.....	.....
ZL 3, 4	.....	.....
ZS 3	.....	.....
ZS, T, U, 1, 2	.....	.....
ZS, T, U, 4, 5, 6	.....	.....
Contacts and Points	.....	.....
Totals	.....	.....

## OFFICIAL ENTRY FORM FOR B.E.R.U. CONTEST, 1939

Name (Block Letters) .....	Transmitter .....
Address .....	Receiver .....
Input Power to last Valve .....	Aerial systems used .....
<b>DECLARATION</b>	
I hereby certify that my station was operated strictly in accordance with the rules and spirit of this Contest, and I agree that the decision of the President, R.S.G.B., shall be final in all cases of dispute.	
Date .....	Date .....
Signed .....	Signed .....

Date	G.M.T. Contact Established	Band Used—Mc.	Serial Numbers Incoming.	Station Points Outgoing	Station Points Worked	Total Points	Date
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Make sure you have read the rules carefully, and don't forget the analysis.

## The Canadian Amateur Radio Co-operation Corps

By MAJOR F. A. BURGESS

A group of amateurs in and around Toronto, who have felt for a long time that there should be closer co-operation between the amateurs of Canada and the Signals branch of the Canadian Militia, are organizing a relay chain to practise and use army wireless telegraph procedure. The organization is known as the Canadian Amateur Radio Co-operation Corps. It was organized in the hope that it may—

(a) Provide established channels of radio communication throughout the Dominion of Canada that may, in time of emergency, be used to augment or replace the land lines, both telephone and telegraph, that might be destroyed or seriously damaged by flood, fire, sleet, tornado, riot, insurrection or sabotage;

(b) Provide a large number of civilian amateur radio operators, who reside in places where there are no organized branches of the Militia Signal units, with a knowledge of military radio procedure and the methods of using radio as a means of signal communication "in the field";

(c) Acquaint the civilian amateur radio operators of Canada with the Militia Signal units, and secure their support for Signals activities, and obtain their aid in experimental work and tests;

(d) Build up a strong and unified body of amateur radio operators in Canada.

In order that the Canadian Amateur Radio Co-operation Corps may be readily available to the military authorities if it should ever be required in a national emergency, it is divided into eleven district nets, corresponding with the eleven military districts of Canada.

The Corps is at present being organized with Corps Headquarters at Toronto, and a district headquarters in each of the following cities: Halifax, Saint John, Quebec, Montreal, Kingston, Toronto, London, Winnipeg, Regina, Calgary and Victoria. At each district headquarters there will be a district net control station, and an alternate district net control station. Each district net control station will organize a district net, consisting of all members of the organization within the district. There will also be a Corps net, consisting of the Corps net control station at Toronto, and the eleven district net control stations. Except in cases of extreme emergency, all traffic will be handled strictly along the lines of organization.

Any British subject residing in the Dominion of Canada who is of the full age of eighteen years or more, who holds a valid amateur radio license, and who is the owner and operator of an amateur radio station, is eligible for membership. Applicants may apply for membership by signing an application form, subscribing to the oath of allegiance provided, and undertaking to keep all assigned schedules and to abide by all such rules and regulations as may be issued from time to time. Membership shall be for a period of two years initially, and may be renewed for further periods of two years.

A certificate of membership will be issued to each amateur whose application for membership is accepted. Such certificate will be valid for a period of two years unless revoked sooner for cause. A station holding a valid certificate of membership shall be called a "Signals Co-operation Station."

Each net will hold drill by radio-telegraphy one night a week during the fall, winter and spring, for at least two hours each night. Every member will report by radio to his net control station at 8.00 p.m. (or such other hour as may be arranged) every drill night, and remain on duty until his net control station dismisses the net. Each net control station will also go on the air one other night in each week, at which time the members of the net may report for duty if they wish, but are not obliged to do so.

During weekly drills each net will practise army wireless telegraph procedure, and will handle traffic on army message forms.

The officers of "A" Corps Signals, Royal Canadian Corps of Signals (N.P.), are actively interested in the success of this new amateur venture. The Wireless Section of "A" Corps Signals is installing an amateur radio station at its headquarters in Toronto, to work with the amateurs and act as Corps net control station. The receiving equipment will consist of a National HRO Jr. receiver, and the transmitting equipment will consist of an 802 crystal oscillator-frequency doubler, an 807 buffer-doubler, and an 808 power amplifier, delivering 100 watts to the antenna and working on 80 and 40 meters CW. Construction of the station has commenced, and it is hoped to have it on the air by the end of January.

As soon as this station is in commission it will require a staff of amateurs to operate it. It is expected to form an Amateur Section in "A" Corps Signals early in February, in order to train the necessary personnel required for the Corps net control station. Membership will be restricted to holders of amateur licenses in Toronto, who will be given an intensive course of training in army procedure and traffic handling, in order that they in turn will be able to go on the air from the Corps station and their own stations at home, and instruct the new members of the Canadian Amateur Radio Co-operation Corps in army W-T procedure.

All inquiries for additional information regarding the Canadian Amateur Radio Co-operation Corps, and requests for membership application forms, should be addressed to Major F. A. Burgess, Corps Liaison Officer, 185 Spadina Ave., Toronto, or to Mr. F. H. B. Saxon (VE3SG). Corps Radio Aide, 302 Lee Avenue, Toronto.

### Club Activities

Wireless Association of Ontario (Canada's oldest radio club) meets second Friday of each month at Radio College of Canada, 863 Bay St., Toronto. Meeting of Feb. 10 will feature an auction sale of radio parts, tubes, etc. Every ham welcome. Average attendance — 60.

A new club, the Key Klick Klub, has been formed in Toronto east end. VE3AID is president, 3AWP vice-pres. and 3ATI sec-treas. Meetings are held the second and fourth Mondays of each month at 8.15 p.m. at 231 Gainsboro Road. Visitors cordially welcomed.

The Northern British Columbia Amateur Radio Ass'n was formed recently at Prince Rupert, B.C. VE5TJ (Box 1714) is sec-treas. Membership is now 15, with good prospects for 1939.

The Intercity Amateur Radio Ass'n at St. Thomas, Ont., has 45 members and 37 attended the last meeting. Bill Shaw, VE3APL, is sec-treasurer.

The Ottawa Amateur Radio Transmitting Ass'n held a very successful Christmas and New Year's round table QSO with 14 stations taking part in each.

They are now holding meetings at St. Pat's College, QTH of 3AWF, where excellent facilities are available. PY and PD are new on 75m. phone with PD also on 20. WC and LC are back on again, and

RJ is rebuilding to pair 809's after more than two years' silence. The following code practice broadcasts are sponsored by the Ottawa club:—Wed., 7-7.30 p.m., VE3AJB, 3750 kc; Thurs., 7-7.30 p.m., VE3DA, 3532 kc. MX has 100 kc oscillator and is also getting 50 kc points with it. The Ottawa association will shortly be running a Club QSO contest—more details later. The secretary-treasurer of the Ottawa A.R.T.A. is VE3PD. VE3ABH's phone number is now 7388R, MIM.

The West End Amateur Radio Club, Vancouver, with VE5NG, as secretary-treasurer, report a very enjoyable Christmas banquet at a downtown cafe held jointly with another Vancouver club. Following the dinner there was a series of two-minute speeches of given topics. A Professor Quiz contest was held and also the attendants learned how many words could be made out of the word "oscilloscope". This club meets the second and fourth Tuesdays of each month. This club is also busy building portable rigs for next summer's field days. A President's Cup Contest is now under way and will be awarded to the most valuable all-round club member. Stations are being inspected for neatness, and the rig is carefully put off the air and the owner given a certain time in which to get it on again. Club interest, code speed, and being on time for meetings also count.

The Fort Frances Radio Club, Fort Frances, Ont., was formed last fall. 3AWY is president and 3AWZ secretary. The meeting dates are every Wednesday and Sunday.

The Victoria Short Wave Club, Victoria, B.C., have their constitution and by-laws in a very attractive small printed booklet with their club emblem on the front.

The Brantford (Ont.) Amateur Radio Club have movies of the club's 1937 and 1938 picnics and would be glad to loan them to any other clubs interested.

Peter Wekel is secretary-treasurer of the East Kootenay Radio Amateur Ass'n at Kimberley, B.C.; and VE4TY is serving in the same position for the Calgary Amateur Radio Ass'n.

XTAL hopes all club secretaries will send in news of activities of their respective clubs to arrive in Toronto each month by the 15th. Each club has its own ways and means of stimulating interest. The swapping of such ideas would be of mutual advantage to all.

## Tuning the Choke to Reduce A.C. Ripple

Many of us, due to economic reasons, are compelled to make use of chokes in our filter systems that are not properly designed to carry the load required. In other words, as the current through the choke increases, the inductance drops and thus the impedance of the filter is lowered, allowing a greater percentage of the A.C. component of the rectified wave to get through the filter.

Another factor to be considered in dealing with 25-cycle current is that, for an equivalent percentage of allowable ripple as compared to 60-cycle current, the inductance and capacity values in the filter should be multiplied by 2.4. Thus increase in inductance and capacity when figured in terms of dollars and cents is considerable, especially when the load requirements are in excess of 1,000 volts and 200 mls.

A simple and inexpensive method of reducing the A.C. ripple in cases where the inductance of the choke drops considerably under load is to resonate the choke at approximately the ripple frequency by connecting .1 mfd. condensers in parallel across it until the A.C. ripple voltage is reduced to its lowest value as measured by a high resistance A.C. voltmeter. The idea is, of course, not new, but the application of it has not been widespread.

The procedure is as follows: A lead from the positive terminal of the power supply under test is connected to one terminal of a high voltage condenser of from ¼ to 1 mfd. capacity. The other terminal of the condenser is brought to one side of an ordinary closed circuit jack and the other side of the jack is connected to the negative terminal of the power supply. The condenser should be able to withstand the full voltage of the power supply.

Now turn on the transmitter and close the key. Plug the A.C. voltmeter in the jack and note the reading, which is the value of the A.C. voltage getting through the filter. Leave the key closed and pull out the A.C. voltmeter plug, then shut off the transmitter and connect a .1 mfd. 600-volt condenser across the choke. Turn on the transmitter, close the key and take another reading on the voltmeter. It should be lower than the first one.

Repeat the above procedure, adding .1 mfd. condensers in parallel across the choke until the ripple voltage reaches a minimum value and the addition of further capacity causes the A.C. voltage to

rise again. At the minimum reading the choke and capacity across it act as a resonant trap circuit at the ripple frequency and the impedance is increased, thus reducing the ripple voltage to a low value.

Care should be taken to make sure that the A.C. voltmeter is plugged into the measuring jack after the power supply and external load circuit are in normal operating condition, and the meter should be removed from the circuit before turning off the power supply or removing the load, otherwise the charging current through the output filter condenser might burn out the meter if it were left in the circuit at all times.

## For More VE QSO's

The common habit of tuning the receiver only five kilocycles each side of the transmitting frequency of a calling station, and the desire of VE's to communicate with each other more frequently, have combined to inspire several verbal and written suggestions.

The consensus is that the use of existing tuning indicating Q signals, along with new ones suggested by VE3IW, and practice of the information conveyed by them, will be productive of a greater number of VE contacts.

Signals and their meanings follow:

QML—I will tune from the middle of the band to the low frequency end.

QLM—I will tune from the low frequency end of the band to the middle.

QMH—I will tune from the middle of the band to the high frequency end.

QHM—I will tune from the high frequency end of the band to the middle.

Suggested additions:

QFL—I will tune from my own frequency to the low frequency end of the band.

QFH—I will tune from my own frequency to the high frequency end of the band.

We urge all VE's to use the following calling procedure, that we may make full use of our frequency allotments, and increase our operating enjoyment by raising the percentage of CQ's answered:

CQ CQ CQ QHM (or choice) de VExxx CQ CQ CQ QHM de VExxx CQ CQ CQ QHM de VExxx VExxx VExxx QHM K.

## Members' Activity Reports

VE3AQD reports someone bootlegging his call. He got a card from W9, the W9's first VE. That's tough on the W9. It will also be tough on the bootlegger when he's caught. 3AJQ is a grain and fruit farmer and has a call pin especially made which is lettered:

VE3AJQ

VE OPS

That does make an attractive pin, doesn't it? Thanks to AJQ for the idea. How would it be if the VE OPS gave such call pins away as prizes in future contests and QSO parties? 3ATF suggests we have a list of QSL's at the QSL bureaus printed in XTAL. Elsewhere you will find a list of VE5 cards that VE5HR has. If the various QSL managers would care to send XTAL a list of calls, XTAL will do the rest. Another VE3 suggests the subject is old but of vital importance. "Run a few lines in your next issue re those birds that promise to QSL, or exchange QSL's, and do not." 3RQ works with the National Cash Register Company, Toronto. 3ATR runs a grocery store in Kincardine, has worked 318 different stations on 80 since August, and has 277 QSL's. That should be a record hard to beat. 4WP is with the Imperial Bank, Maymont, Sask. 3ASX, Sioux Lookout, is ex-4BR. 2IB, at Rouyn, is ex-3AR. 5IL lives at Ceepeecee, B.C. It is reported a couple of VE4 phones are operating out as far as 14080 kc. 5HR reports DX slow of late, particularly Asia and Oceania on 14 mc. He has worked VQ3HJP, and advises OQ5AS, 5HR and 5AV came through well before New Year's. We hear 5AAD and 5ZM are B.C.'s star dx men at present. 4KJ uses a dynamotor to 6V6-PP 89's. 4AF works on refrigeration for the Consolidated Fruit Co. and 4EO is in charge of the fire alarm system, both in Lethbridge; 4EO would like to know if any of the gang have discovered how to get rid of QRM from those diathermy machines. 3ES is with the R.C.A.F., No. 10 at Mount Dennis. 3VN is with Leitch Gold Mines at Beardmore. 3TS is a radio serviceman in Sarnia. 4AFP is with the Royal Bank at Kerrobert, Sask. 5AAJ is with CKMO. 4AIX is a C.P.R. locomotive engineer. 3ADV is with Bank of Montreal at Simcoe. 3AEP is with Pickle Crow Mines. 3AQB is old 3KC (1921). 3AFW is with the Dominion Bank, Lindsay.

Before leaving Simcoe for Belleville VE3ADV had the satisfaction of receiving his W.A.C. Certificate from A.R.R.L.

after waiting a long time for his Asian card. J5CC finally came through.

DX, especially from South Africa and Asia, seemed good during December, and the following stations, among others, were worked by VE3ADV: ZS5CU, ZS6DM, SU1SG, CR7AG, VS6AO, XU4XA, VQ2PL, and two Yukon stations, VE5QB and VE5NF.

Most of the gang in Simcoe were not active except VE3KW, who came on on 14 mc, C.W. and phone with 450 watts and worked VR6AY, and ZS and CR7, which were new countries for him after about two years' silence.

All the Simcoe gang attended a farewell party at the shack of VE3ADV on Jan. 2, and an uproarious time was had by all. (Incidentally several hams were oscillating with quarts control.)

We'd certainly appreciate having any dope you would care to send in.

## QSL's for VE5's

H. R. Hough, VE5HR, 1785 First St., Victoria, B.C., has cards for the following. Unless otherwise requested envelopes will be returned when full (five cards). Correct to Jan. 11, 1939:

VE5AA, AAA, AAB, AAY, AB, ABZ, AC, ADD, ADE, ADG, ADJ, ADX, AEG, AEU, AEW, AEY, AFB, AFL, AFX, AGD, AGF, AGH, AGI, AGX, AGY, AHU, AHZ, AI, AID, AIL, AIW, AIZ, AJH, AJI, APD, AT, AW, AZ, BI, CC, CN, DX, EG, EU, FE, FO, FX, GM, GV, HB, HU, KW, KZ, LK, MR, NC, OA, OC, OJ, OY, PM, PP, PT, QN, QW, RC, RE, RP, RW, SI, SO, ST, TA, TB, TC, TL, TM, TR, TV, TY, UG, UQ, UR, UW, VF, VP, ZT, ZW.

## QRV?

At press time the membership of the association numbers 310. To meet our circulation obligations to our advertisers, a few complimentary copies will be sent out until the membership alone is sufficient.

One of the best ways of serving your association at the present time is to boost it whenever possible. If each member will get a new member, our organization will consist of approximately half the active hams in the Dominion, and its influence will be increased proportionately. We know you will be eager to assist.

### Notes on Condx

**20 Metres.**—Snatches of information gathered on the air from VE stations show that 20 metres was very erratic during December and early January. On the whole, conditions could be classified as poor, with short periods of good dx, and times when the old skip was exceptionally short.

Heard VE3QR in Cornwall working Montreal over a distance of 60 miles. London, St. Catharines and Welland worked into Toronto, distances varying from 35 to 100 miles. VE4's in Winnipeg hear Dryden, Ont., about 70 miles away.

VE1DQ suggests looking for VE1CO or VE1GH in Prince Edward Island on 20 and 75, if you are after that "WAVE" certificate. Also active in the maritimes are VE1GR, 1FO, 1FQ. A peculiar condition existed in N.B. and N.S. Europeans have been pounding in consistently down there, but reports show that their signal strength drops right down as they attempt to QSO inland points.

On New Year's Day an impromptu transcontinental hookup was put in operation by 20-metre phones for the purpose of exchanging greetings across Canada. The hookup and ensuing round-table consisted of VE1CK, 1EH, 2CW, 3ST, 3ZV, 3AHA, 4ZK, 4JV, 4HQ and 5AEJ. One station (4ZK in Winnipeg) could hear all participating stations. Nice work, VE's.

**Flash for Expedition Hunters.**—Look for ZX9AM, a navy op "hamming" on board S.S. California, a whale oil ship headed for the Antarctic to relieve her sister ship, S.S. Ulysses, now frozen in the ice pack with a tremendous load of whale oil aboard (see particulars and pictures in December "Life" magazine). ZX9AM left Port Arthur, Texas, on Dec. 10, and while crossing the equator on Christmas Day was QSO VE3AHA in Dryden. 3AHA reports ZX9AM's frequency as 14,120 kc on phone, using 11 watts input to an 807. He is looking for VE stations throughout the voyage, and reports the following as being heard frequently: VE1DQ, VE2BV, VE3AFD, VE3AHA, VE4GU. Anyone working him give us further dope, and also let us have dx notes on all bands.

**160 Metres.**—VE3ARF (operator at CBL) worked a VE5 station on 160 metres in early January, so who says they can't hear or work 'em on the dx bands? Wait till the spot frequencies for VE's come into general use. Oh, boy!

**10 Metres.**—A peculiar condition has been noted on 10 metres in Ontario. After the band has folded up for the night (about 10 o'clock) W8 stations within 100 miles or so have been heard and worked by VE3 at about R6 to R7. The W8's report that this has been going on for some time.

VE3RF

### St. Catharines News

VE3JX is on 80 meters with a pair of 809's PP. He keeps sked with VE3XY in St. Catharines, Ont. His QTH is Govt. Wireless Station, Hanlan's Island (Island Delivery). VE3XY has just put up new sky hook; bad windstorm blew down original pole, which wasn't guyed; present pole is well guyed and steady as a house. VE3XY has new Meissner Signal Shifter and finding it FB. Worked G3HK, G6CL and XE2F on 40 with about 10 watts output. Hope have a T40 working with the Sig Shifter soon. VE3AUR is relatively new ham in St. Catharines, and has about 70 watts on 40 meters. VE3FE, St. Catharines (ex-Bowmanville ham), is nearly ready to hit air with new 50-watt rig. Have written my letter re ex-PA0XX (see page 17, December QST). Hope plenty VE hams do their stuff. Here's some technical dope that may interest you: In trying to neutralize a pair of 809's Class C, I found that the job couldn't be done properly unless twisted pair between final link and antenna link was removed. Maybe this will help someone experiencing this difficulty.—VE3XY.

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